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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
UNELUS, ERNEST	
ART UNIT	PAPER NUMBER
2181	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/829,007	LEAMING, TAYLOR J.	
	Examiner	Art Unit	
	Ernest Unelus	2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-10,13-19,22-28 and 31-41* is/are pending in the application.

4a) Of the above claim(s) *2,3,11,12,20,21,29 and 30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1,4-10,13-19,22-28 and 31-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

RESPONSE TO AMENDMENT

Claim rejections based on prior art

Applicant's arguments filed 10/27/2006 have been fully considered but they are not persuasive.

The applicant argues that the Maier reference did not discloses a system utilization metric exceeding a threshold.

Maier discloses a negotiation flag (see par. 0041), which is being use as a metric. The metric exceeding a threshold is the negotiation flag moving from not active-to-active. As stated in paragraphs (steps) 0042 to 0049, the negotiation flag getting to an active state is exceeding a threshold. The claim language doesn't specifically express what is the metric and how the metric exceeds a threshold.

Also, as part of the applicant's remarks, for example on page 14, the applicant stated the claim language to recite, "selectively removes the attachment signal based upon a system utilization metric exceeding a threshold". This limitation is not fully disclose in the claim language; for example, the claim doesn't disclose 'removes'.

The terminal disclaimer filed on 10/27/06 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of application # 10/829,007 has been reviewed and is accepted. The terminal disclaimer has been recorded.

I. INFORMATION CONCERNING OATH/DECLARATION

Oath/Declaration

1. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63.**

II. INFORMATION CONCERNING DRAWINGS

Drawings

2. The applicant's drawings submitted are acceptable for examination purposes.

III. ACKNOWLEDGEMENT OF REFERENCES CITED BY APPLICANT

3. As required by **M.P.E.P. 609(C)**, the applicant's submissions of the Information Disclosure Statement dated July 30, 2004 is acknowledged by the examiner and the cited references have been considered in the examination of the claims now pending. As required by **M.P.E.P 609 C(2)**, a copy of the PTOL-1449 initialed and dated by the examiner is attached to the instant office action.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1-18 and 28-41** are rejected under 35 U.S.C. 102(e) as being anticipated by

Maier (US 2005/0251596) in view of Lu et al. 2005/0108571.

6. As per **claims 1, 10, and 28**, the following multiple reference 35 U.S.C. 102(e) rejections is made in reference to MPEP 2131.013.

Maier discloses "An integrated circuit for a smart card **(USB device in fig. 1)** and comprising: an input and output device; and a processing system for communicating with a host device **(USB host in fig. 1)** via the input and output device, said processing system for providing at least one default descriptor **[descriptors (I)]** to the host device **(see paragraph 0043)**, cooperating with the host device to perform an enumeration based upon the at least one default descriptor **(paragraph 0043 discloses "in a first enumerating step ENUM1, the USB host will enumerate the USB device. In other words, as illustrated in FIG. 2, the USB host will retrieve from the USB device to the USB host only the descriptors (I) associated to the standard service SO and to the mass storage service S1")**, and detecting a system event and, responsive to the system event **(see fig. 3)**, providing at least one alternate descriptor **[descriptors (II)]** to the host device and cooperating with the host device to perform a new enumeration based thereon **[(paragraph 0043 discloses "in a second enumerating step ENUM2, the USB host enumerates the USB device. As illustrated in FIG. 2, only the descriptors (II) associated to the services (S1, S2, S3) which have been activated and the descriptor associated to the standard service (S0) will be retrieved"). Maier discloses the functionality of the smart card and fail to specifically discloses the structure of the card. However, it is an inherent feature for the smart card to be an integrated circuit having a transceiver, a processor and descriptors. For example, as evidence, Lu discloses,** "An

example of such a resource-constrained device is the smart card. A smart card is simply a plastic card containing an integrated circuit with some memory and a microprocessor. Typically the memory is restricted to 6K bytes of RAM. It is anticipated that smart card RAM may increase by a few kilobytes over the next few years. However, it is very likely that memory size will continue to be an obstacle to smart card applications. Most smart cards have 8-bit microprocessors", and paragraph 0232 and fig. 11, which further illustrate a smart card having descriptors]

7. As per **claims 2, 11, and 29,** , Maier discloses "The integrated circuit of claim 1," **[See rejection to claim 1 above]** "wherein the system event comprises a system utilization metric exceeding a threshold" **(with respect to this limitation, paragraph 0015 from the applicant's specification discloses "In such case, the system utilization metric may indicate that bus utilization is above a threshold, which would prompt the processor to re-enumerate using one or more alternate descriptors that would allow it to more efficiently utilize the limited bandwidth". Similarly, Maier discloses, in paragraph 0055, "in a second enumerating step ENUM2, the USB host enumerates the USB device. As illustrated in FIG. 2, only the descriptors (II) associated to the services (S1, S2, S3) which have been activated and the descriptor associated to the standard service (S0) will be retrieved").**

8. As per **claims 3, 12, and 30**, Maier discloses "wherein the system event comprises the occurrence of attempted unauthorized communications" **(with respect to this limitation, paragraph 0048 from the applicant's specification discloses "Another example of a system**

event which may trigger a new enumeration is the occurrence of attempted unauthorized communications, at Block 61', such as would be the case when someone attempts to eavesdrop or hack into the system 20.". Similarly, Maier discloses, in paragraph 0019, "In addition, an Internet Service Provider can, for example, define its own proprietary login application and store it on the Smart Card itself (USB device). The risk of hacking the login application is therefore reduced").

9. As per **claims 4, 13, 31, 37, and 40**, Maier discloses "wherein the at least one alternate descriptor comprises at least one device descriptor **(see paragraph 0008)**.

10. As per **claims 5, 14, and 32**, Maier discloses "wherein the at least one alternate descriptor comprises at least one configuration descriptor **(see paragraph 0009)**.

11. As per **claims 6, 15, and 33**, Maier discloses "wherein the at least one alternate descriptor comprises at least one interface descriptor **(see paragraph 0010)**.

12. As per **claims 7, 16, and 34**, Maier discloses "wherein the at least one alternate descriptor comprises at least one endpoint descriptor **(see paragraph 0011)**.

13. As per **claims 8 and 17**, Maier discloses "further comprising at least one memory connected to said processor for storing the at least one default descriptor and the at least one alternate descriptor **(see paragraph 0013).**

14. As per **claims 9, 18, 35, 38, and 41**, Maier discloses "wherein said transceiver comprises a universal serial bus (USB) transceiver" (**fig.1 shows input/output information from the USB device, which means you must have a transceiver inside the card to accept the incoming information and to output information. Paragraph 0077 discloses the USB using different protocol such firewire, which is a Universal Serial Bus version 2.0 (USB)**, and wherein said processor operates in a USB mode **(see fig. 1)**.

15. As per **claims 35 and 39**, the following multiple reference 35 U.S.C. 102(e) rejections is made in reference to MPEP 2131.013.

Maier discloses "An integrated circuit for a smart card **(USB device in fig. 1)** and comprising: an input and output device; and a processing system for communicating with a host device **(USB host in fig. 1)** via the input and output device, said processing system for providing at least one default descriptor **[descriptors (I)]** to the host device **(see paragraph 0043)**, cooperating with the host device to perform an enumeration based upon the at least one default descriptor **(paragraph 0043 discloses "in a first enumerating step ENUM1, the USB host will enumerate the USB device. In other words, as illustrated in FIG. 2, the USB host will retrieve from the USB device to the USB host only the descriptors (I) associated to the standard service SO and to the mass storage service S1")**, detecting an occurrence of attempted unauthorized communications, **(with respect to this limitation, paragraph 0048 from the applicant's specification discloses "Another example of a system event which may trigger a new enumeration is the occurrence of attempted unauthorized communications,**

at Block 61', such as would be the case when someone attempts to eavesdrop or hack into the system 20.". Similarly, Maier discloses, in paragraph 0019, "In addition, an Internet Service Provider can, for example, define its own proprietary login application and store it on the Smart Card itself (USB device). The risk of hacking the login application is therefore reduced") and, responsive to the system event **(see fig. 3)**, providing at least one alternate descriptor **[descriptors (II)]** to the host device and cooperating with the host device to perform a new enumeration based thereon **[(paragraph 0043 discloses "in a second enumerating step ENUM2, the USB host enumerates the USB device. As illustrated in FIG. 2, only the descriptors (II) associated to the services (S1, S2, S3) which have been activated and the descriptor associated to the standard service (S0) will be retrieved"). Maier discloses the functionality of the smart card and fail to specifically discloses the structure of the card. However, it is an inherent feature for the smart card to be an integrated circuit having a transceiver, a processor and descriptors. For example, as evidence, Lu discloses, "An example of such a resource-constrained device is the smart card. A smart card is simply a plastic card containing an integrated circuit with some memory and a microprocessor. Typically the memory is restricted to 6K bytes of RAM. It is anticipated that smart card RAM may increase by a few kilobytes over the next few years. However, it is very likely that memory size will continue to be an obstacle to smart card applications. Most smart cards have 8-bit microprocessors", and paragraph 0232 and fig. 11, which further illustrate a smart card having descriptors].**

Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. **Claims 19-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Maier (US 2005/0251596) in view of Lu et al. 2005/0108571.

18. As per **claim 19,** Maier discloses "A smart card system **(USB device in fig. 1)** comprising: a host device **(USB host device in fig. 1)**; comprising: an input and output device; and a processing system for communicating with a host device **(USB host in fig. 1)** via the input and output device, said processing system for providing at least one default descriptor **[descriptors (I)]** to the host device **(see paragraph 0043)**, cooperating with the host device to perform an enumeration based upon the at least one default descriptor **(paragraph 0043 discloses "in a first enumerating step ENUM1, the USB host will enumerate the USB device. In other words, as illustrated in FIG. 2, the USB host will retrieve from the USB device to the USB host only the descriptors (I) associated to the standard service SO and to the mass storage service S1")**, and detecting a system event and, responsive to the system event **(see fig. 3)**, providing at least one alternate descriptor **[descriptors (II)]** to the host device and cooperating with the host device to perform a new enumeration based thereon **[(paragraph 0043 discloses "in a second enumerating step ENUM2, the USB host enumerates the USB device. As illustrated in FIG. 2, only the descriptors (II) associated to the services (S1, S2, S3)**

which have been activated and the descriptor associated to the standard service (S0) will be retrieved"). Maier discloses the functionality of the smart card and fail to specifically discloses the structure of the card. However, it is an inherent feature for the smart card to be an integrated circuit having a transceiver, a processor and descriptors. For example, as evidence, Lu discloses, "An example of such a resource-constrained device is the smart card. A smart card is simply a plastic card containing an integrated circuit with some memory and a microprocessor. Typically the memory is restricted to 6K bytes of RAM. It is anticipated that smart card RAM may increase by a few kilobytes over the next few years. However, it is very likely that memory size will continue to be an obstacle to smart card applications. Most smart cards have 8-bit microprocessors", and paragraph 0232 and fig. 11, which further illustrate a smart card having descriptors]. In regards to the adapter, Maier clearly fails to specifically disclose a card adapter connected to the host.

Lu discloses a card adapter connected to a smartcard comprising an integrated circuit **(see paragraph ooo4 and fig. 1)**

Maier (US 2005/0251596) and Lu et al. (US 2005/0108571) are analogous art because they are from the same field of endeavor of communication between a smart card and a computer.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the system comprising a main device and an auxiliary device arranged to co-operate with each other as taught by Maier and an infrastructureless resource-constrained device, for example, a smart card, capable of acting as a full-fledged network node providing secure

communication to other nodes on the network and in which the security boundary is located on the infrastructureless resource-constrained device as taught by Lu

The motivation for doing so would have been because Lu teaches that determining whether there is enough free space in memory before transferring data **["The smart card reader 215(6b) provides an implementation of the Peer I/O Server 613(6b), described in greater detail herein below. The smart card reader 215(6b) connects to the smart card 201(6b) through an ISO standard half-duplex I/O interface and to a host computer 217(6b) via a standard full-duplex I/O interface 607. Because the smart card reader 215(6b) completely handles the ISO 7816 protocol, and connects to the host computer 217(6b) using standard serial protocol, no additional software, beyond that which is normally found on a PC, is needed on the host PC 217(6b)"]**.

Therefore, it would have been obvious to combine Maier (US 2005/0251596) and Lu et al. (2005/0108571) for the benefit of creating a smart card to communicate with a host to obtain the invention as specified in claim 19.

19. As per **claim 20**, the combination of Maier and Lu discloses "The smart card system of claim 19," **[See rejection to claim 19 above]** Maier further discloses "a system utilization metric exceeding a threshold" **(with respect to this limitation, paragraph 0015 from the applicant's specification discloses "In such case, the system utilization metric may indicate that bus utilization is above a threshold, which would prompt the processor to re-enumerate using one or more alternate descriptors that would allow it to more efficiently utilize the limited bandwidth". Similarly, Maier discloses, in paragraph 0055, "in a second enumerating step ENUM2, the USB host enumerates the USB device. As illustrated in FIG. 2, only the**

descriptors (II) associated to the services (S1, S2, S3) which have been activated and the descriptor associated to the standard service (S0) will be retrieved").

20. As per **claim 21**, the combination of Maier and Lu discloses "The smart card system of claim 19," **[See rejection to claim 19 above]** Maier further discloses "wherein the system event comprises the occurrence of attempted unauthorized communications" **(with respect to this limitation, paragraph 0048 from the applicant's specification discloses "Another example of a system event which may trigger a new enumeration is the occurrence of attempted unauthorized communications, at Block 61', such as would be the case when someone attempts to eavesdrop or hack into the system 20.". Similarly, Maier discloses, in paragraph 0019, "In addition, an Internet Service Provider can, for example, define its own proprietary login application and store it on the Smart Card itself (USB device). The risk of hacking the login application is therefore reduced").**

21. As per **claim 22**, the combination of Maier and Lu discloses "The smart card system of claim 19," **[See rejection to claim 19 above]** Maier further discloses "wherein the at least one alternate descriptor comprises at least one device descriptor" **(see paragraph 0008)**.

22. As per **claim 23**, the combination of Maier and Lu discloses "The smart card system of claim 19," **[See rejection to claim 19 above]** Maier further discloses "wherein the at least one alternate descriptor comprises at least one configuration descriptor"**(see paragraph 0009)**.

23. As per **claim 24**, the combination of Maier and Lu discloses "The smart card system of claim 19," **[See rejection to claim 19 above]** Maier further discloses "wherein the at least one alternate descriptor comprises at least one interface descriptor" **(see paragraph 0010)**.

24. As per **claim 25**, the combination of Maier and Lu discloses "The smart card system of claim 19," **[See rejection to claim 19 above]** Maier further discloses "wherein the at least one alternate descriptor comprises at least one endpoint descriptor" **(see paragraph 0011)**.

25. As per **claim 26**, the combination of Maier and Lu discloses "The smart card system of claim 19," **[See rejection to claim 19 above]** Maier further discloses "wherein said integrated circuit further comprises at least one memory connected to said processor for storing the at least one default descriptor and the at least one alternate descriptor" **(see paragraph 0013)**.

26. As per **claim 27**, the combination of Maier and Lu discloses "The smart card system of claim 19," **[See rejection to claim 19 above]** Maier further discloses "wherein said transceiver comprises a universal serial bus (USB) transceiver (**fig.1 shows input/output information from the USB device, which means you must have a transceiver inside the card to accept the incoming information and to output information. Paragraph 0077 discloses the USB using different protocol such firewire, which is a Universal Serial Bus version 2.0 (USB)**, and wherein said host device and said processor operate in a USB mode **(see fig. 1)**.

IV. RELEVANT ART CITED BY THE EXAMINER

27. The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure. See **MPEP 707.05(c)**.

28. The following reference teaches a USB smart card in communication with a USB host.

U.S. PATENT NUMBER

US 2001/0056539

US 5,568,179

PCT/IB03/02801

V. CLOSING COMMENTS

Conclusion

a. STATUS OF CLAIMS IN THE APPLICATION

29. The following is a summary of the treatment and status of all claims in the application as recommended by **M.P.E.P. 707.07(i)**:

a(1) CLAIMS REJECTED IN THE APPLICATION

30. Per the instant office action, claims 1, 4-10, 13-19, 22-28, and 31-41 have received a final action on the merits.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the

THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

b. DIRECTION OF FUTURE CORRESPONDENCES

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernest Unelus whose telephone number is (571) 272-8596. The examiner can normally be reached on Monday to Friday 9:00 AM to 5:00 PM.

IMPORTANT NOTE

32. If attempts to reach the above noted Examiner by telephone is unsuccessful, the Examiner's supervisor, Mr. Fritz M. Fleming, can be reached at the following telephone number: Area Code (571) 272-4145.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 05, 2007

Ernest Unelus
Examiner, Art Unit 2181

DONALD SPARKS
SUPERVISORY PATENT EXAMINER